What is claimed is:

1. A system for deploying and retracting a filter during a procedure, the system comprising:

(a) a filter device adapted to capture material within a fluid, said filter device comprising:

(i) a guide member adapted to act as an exchange guidewire;

(ii) a filter connected to said guide member, said filter being adapted to capture the material within the fluid;

(iii) a restraining member coupled to said guide member and adapted to prevent said filter from being deployed;

(iv) an actuating assembly cooperating with said restraining member, said actuating assembly being configured to deploy said filter and maintain said filter in a selected position upon activation of said actuating assembly; and

(b) a capture catheter selectively coupled to said filter device, said capture catheter being adapted to at least partially surround said filter when material has been capture by said filter following deploying said filter.

2. A system as recited in claim 1, wherein said guide member further comprises a distal end and a proximal end, said distal end comprising a plurality of struts.

3. A system as recited in claim 1, further comprising a strut assembly coupled to a distal end of said guide member, said strut assembly comprising a plurality of struts.

4. A system as recited in claim 1, wherein said restraining member comprises at least one of a sleeve and a securing member.

5. A system as recited in claim 1, wherein said filter device comprises a plurality of struts, wherein said restraining member comprises at least a part of said plurality of struts and a securing member.

6. A system as recited in claim 1, wherein said restraining member comprises at least part of said filter, wherein said at least part of said filter substantially surrounds a distal end of said guide member.

7. A system as recited in claim 1, wherein said actuating assembly comprises an actuating member coupled to at least one of said filter and said restraining member.

8. A system as recited in claim 1, wherein said actuating assembly comprises:

(a) an actuating member disposed between said restraining member and said guide member; and

(b) an actuating mechanism coupled to said restraining member and configured to move said restraining member in a proximal direction.

9. A system as recited in claim 1, wherein said capture catheter receives at least a portion of said filter device.

10. A system as recited in claim 1, wherein said capture catheter is an over-the-wire capture catheter.

11. A system as recited in claim 1, wherein said capture catheter is a rapid exchange capture catheter.

12. A system as recited in claim 1, further comprising at least one radiopaque marker coupled to at least one of said filter device and said capture catheter.

13. A system for deploying and retracting a filter device for use during a procedure, the filter system comprising:

(a) a filter device adapted to capture material within a fluid, said filter device comprising:

(i) a guide member adapted to act as an exchange guidewire;

(ii) a filter assembly coupled to said guide member, said filter assembly comprising a filter adapted to capture material within the fluid and a plurality of struts coupled to said filter, said plurality of struts being adapted to extend outwardly to open said filter;

(iii) a restraining member coupled to at least one of said guide member and said filter assembly, said restraining member being adapted to prevent said plurality of struts extending outwardly to deploy said filter;

(iv) an actuating assembly cooperating with said restraining member, said actuating assembly being configured to release said restraining member to enable said plurality of struts to extend outwardly; and

(b) a capture catheter coupled to said filter device, said capture catheter being adapted to at least partially surround said filter when material has been capture by said filter following deploying said filter.

14. A system as recited in claim 13, wherein said restraining member comprises a sleeve adapted to slideably cooperate with said guide member.

15. A system as recited in claim 14, wherein said actuating assembly comprises an actuating member coupled to said sleeve and an actuating element coupled to said actuating member, wherein moving said actuating element moves said actuating member to enable said plurality of struts to extend outwardly.

16. A system as recited in claim 13, wherein said restraining member comprises a sleeve surrounding at least a portion of said filter device and a securing member cooperating with said sleeve, wherein the cooperation between said sleeve and said securing member prevents said plurality of struts extending outwardly to deploy said filter.

17. A system as recited in claim 13, wherein said actuating assembly further comprises an actuating member coupled to said restraining member and an actuating element coupled to said actuating member.

18. A system as recited in claim 13, wherein said plurality of struts are biased to open said filter.

19. A system as recited in claim 13, wherein at least one of said plurality of struts comprises a coil disposed thereon.

20. A system as recited in claim 13, wherein said filter assembly further comprises an aperture at a proximal end of said plurality of struts, said aperture being adapted to receive an atraumatic tip.

21. A system as recited in claim 13, wherein said capture catheter comprises a proximal end and a distal end, said proximal end being configured to couple to said actuating assembly and said distal end being configured to force said plurality of struts to close said filter as said distal end is advanced along said guide member.

22. A system as recited in claim 21, wherein said capture catheter comprises a lumen extending from said proximal end to said distal end.

23. A system as recited in claim 21, wherein said capture catheter comprises a lumen extending from a distal end toward said proximal end, a proximal end of said lumen being distal to said proximal end of said capture catheter.

24. A system as recited in claim 21, wherein said capture catheter further comprises a positioning member adapted to enable said capture catheter to be positioned during a procedure.

25. A system as recited in claim 21, wherein said capture catheter further comprises:

(a) a lumen extending from said distal end toward said proximal end; and

(b) an output aperture communicating with said lumen, said output aperture being disposed intermediate of said proximal end and said distal end.

26. A system as recited in claim 13, wherein at least one of said filter device and said capture catheter comprises means for radiopacity.

27. A system as recited in claim 26, wherein said means for radiopacity comprises at least one radiopaque marker.

28. A system as recited in claim 26, wherein said means for radiopacity comprises at least one radiopaque coating applied to at least one part of said filter device and said capture catheter.

29. A method for deploying and retracting a filter during a procedure, the method comprising:

(a) inserting a filter device into a vasculature of a patient distal of a portion of a blood vessel to be accessed during a procedure, said filter device being adapted to act as an exchange guidewire, said filter device comprising:

(i) a guide member comprising a proximal end and a distal end;

(ii) a filter assembly comprising a filter and a plurality of struts cooperating with said guide member and said filter; and

(iii) a restraining member coupled to at least a portion of said plurality of struts, said restraining member being adapted to apply a restraining force to prevent said filter from being deployed;

(b) deploying said filter into the blood stream to capture material dislodged during the procedure; and

(c) upon positioning a capture catheter to enclose at least a portion of said filter and said guide member, removing said filter device and said capture catheter from the vasculature of the patient.

30. The methods as recited in claim 29, wherein deploying said filter comprises releasing said restraining member to release said restraining force.

31. The method as recited in claim 30, wherein releasing said restraining force further comprises actuating an actuating assembly coupled to said restraining member.

32. The method as recited in claim 31, further comprising actuating an actuating element of said actuating assembly to move an actuating member coupled to said restraining member.

33. The method as recited in claim 31, further comprising moving said actuating element relative to said guide member to release said restraining force.

34. The method as recited in claim 31, further comprising preferentially separating said restraining member about one or more preferential separation regions formed in said restraining member.

35. The method as recited in claim 29, further comprising retracting said filter until an open end is positioned adjacent to said guide member to prevent the captured material from escaping from said filter.

36. The method as recited in claim 35, further comprising moving a distal end of each of said plurality of struts toward a longitudinal axis of a lumen of said guide member to close said open end.

37. A filter device comprising:

(a) a guide member comprising a distal end, a proximal end, and a lumen extending from the distal end to the proximal end,

(b) a plurality of struts coupled to said guide member, at least one of said plurality of struts being biased to extend outwardly;

(c) a filter coupled to at least two of said plurality of struts, said filter being adapted to filter material from a blood stream; and

(d) means for preventing said plurality of struts extending outwardly until said filter is to be deployed into a blood vessel.

38. A filter device as recited in claim 37, wherein each strut of said plurality of struts is adapted to extend outwardly away from a longitudinal axis of said lumen.

39. A filter device as recited in claim 37, wherein said means for filtering comprises a filter, said filter comprising a plurality of pores.

40. A filter device as recited in claim 37, wherein said guide member comprises an atraumatic tip.

41. A filter device as recited in claim 37, wherein at least one of said plurality of struts is biased toward a longitudinal axis of said lumen.

42. A filter device as recited in claim 37, wherein at least one of said plurality of struts comprises an atraumatic tip coil.

43. A filter device as recited in claim 37, further comprising at least one radiopaque marker.

44. A filter device as recited in claim 37, wherein a portion of said guide member is made radiopaque.

45. A filter device comprising:

(a) a guide member comprising a distal end, a proximal end, and a lumen extending from the distal end to the proximal end;

(b) a strut assembly coupled to said distal end of said guide member, said strut assembly comprising a plurality of struts, at least one of said plurality of struts being biased to extend outwardly away from a longitudinal axis of said lumen of said guide member;

(c) a filter coupled to at least one of said plurality of struts, said filter being adapted to filter material from fluid flowing in a fluid stream within which said filter is disposed; and

(d) a restraining member surrounding at least one of said plurality of struts and said distal end of said guide member, said restraining member being adapted to prevent said plurality of struts extending outwardly and subsequently release said plurality of struts when said filter is to be deployed into the fluid stream.

46. A filter device as recited in claim 45, wherein said filter comprises a plurality of pores, at least two of said plurality of pores being differently configured one from another.

47. A filter device as recited in claim 45, wherein said filter comprises a plurality of pores, wherein each of said plurality of pores is sized in the range from about 60 microns to about 100 microns.

48. A filter device as recited in claim 45, wherein said restraining member is adapted to be moved in a proximal direction to enable said plurality of struts to extend outwardly.

49. A filter device as recited in claim 48, further comprising an actuating member coupled to said restraining member and extending substantially to said proximal end of said guide member, said actuating member being adapted to move in the proximal direction to move said restraining member in the proximal direction.

50. A filter device as recited in claim 45, wherein said restraining member is attached to each of said plurality of struts, said restraining member comprising at least one preferential separation region.

51. A filter device as recited in claim 50, further comprising at least one actuating member cooperating with said at least one preferential separation region, said at least one actuating

member adapted to cause said restraining member to preferentially separate at said at least one preferential separation region.

52. A filter device for percutaneous insertion into a blood vessel during a procedure, the filter device comprising:

(a) a guide member comprising a distal end, a proximal end, and a lumen extending from said distal end to said proximal end, said guide member being configured to act as an exchange guidewire;

(b) a filter assembly coupled to said guide member, said filter assembly comprising a filter adapted to filter material from a blood stream and a plurality of struts; and

(c) means for preventing said plurality of struts from extending outwardly to allow said filter to deploy into the blood stream in the blood vessel.

53. A filter device as recited in claim 52, wherein each of said plurality of struts is biased to open said filter.

54. A filter device as recited in claim 52, wherein said filter comprises an open proximal end and a closed distal end, said proximal end being adapted to conform to an inner surface of the blood vessel.

55. A filter device as recited in claim 52, wherein said filter opens in response to a force applied by the blood flowing through the blood vessel.

56. A filter device as recited in claim 52, wherein said filter is fabricated from a woven mesh material.

57. A filter device as recited in claim 52, wherein said filter comprises a material comprising a plurality of pores.

58. A filter device as recited in claim 57, wherein each of said plurality of pores is sized in the range from about 60 microns to about 100 microns.

59. A filter device as recited in claim 57, wherein a major axis and a minor axis of each of said plurality of pores is sized in the range from about 50 microns to about 200 microns.

60. A filter device as recited in claim 52, further comprising means for radiopacity coupled to at least one of said guide member, said filtering, said plurality of struts, and said means for preventing.

61. A filter device as recited in claim 60, wherein said means for radiopacity comprises at least one of (i) a plurality of markers fabricated from a radiopaque material (ii) a plurality of markers coated with a radiopaque material and (iii) a plurality of markers doped with a radiopaque material

62. A filter device as recited in claim 27, wherein said guide member comprises a flexible, atraumatic tip coupled to said filter assembly.

63. A filter device as recited in claim 62, wherein said tip extends through said filter.

64. A filter device as recited in claim 52, wherein said filter assembly is integral with said guide member.

65. A filter device as recited in claim 52, wherein said filter assembly is a separate assembly coupled to said guide member.

66. A filter device comprising:

(a) a guide member comprising a distal end, a proximal end, and a lumen extending from the distal end to the proximal end;

(b) a filter assembly coupled to said guide member, said filter assembly comprising:

(i) a filter comprising a proximal end with an opening formed therein; and

(ii) a plurality of struts coupled to said proximal end of said filter, each of said plurality of struts being biased to open said opening; and

(c) an actuating assembly coupled to said guide member and said filter assembly, said actuating assembly comprising:

(i) a restraining member cooperating with said plurality of struts, said restraining member applying a restraining force to the plurality of struts to prevent the plurality of struts from extending outwardly;

(ii) an actuating member coupled to said restraining member and extending toward said proximal end of said guide member; and

(iii) an actuating element coupled to a proximal end of said actuating member, said actuating element being adapted to move in a proximal direction to release the restraining force to enable said plurality of struts to extend outwardly.

67. The filter device as recited in claim 66, wherein said actuating member is disposed in said lumen of said guide member.

68. The filter device as recited in claim 66, wherein said proximal end of said filter, when deployed, is constrained against the vessel wall.

69. The filter device as recited in claim 66, wherein said guide member further comprises at least one radiopaque marker.

70. The filter device as recited in claim 66, wherein at least one of said plurality of struts is biased to extend inwardly to a center of said lumen.

71. The filter device as recited in claim 66, wherein disposed upon a distal end of the at least one of said plurality of struts is a coiled tip.

72. The filter device as recited in claim 71, wherein said coiled tip extends through said filter.

73. The filter device as recited in claim 71, wherein said coiled tip is coupled to said filter.

74. The filter device as recited in claim 71, wherein said coiled tip extends through an aperture in said filter.

75. The filter device as recited in claim 66, wherein said restraining member further comprises at least one preferential separation region.

76. The filter device as recited in claim 75, further comprising at least one actuating member cooperating with said at least one preferential separation region, said at least one actuating member adapted to cause said restraining member to preferentially separate at said at least one preferential separation region.

77. The filter device as recited in claim 66, where said plurality of struts are integrally coupled to said guide member.

78. The filter device as recited in claim 66, wherein said plurality of struts are separate members that are coupled to a distal end of said guide member.

79. A filter device for percutaneous insertion into a blood vessel during a procedure, the filter device comprising:

(a) a guide member comprising a distal end, a proximal end, and a lumen extending from the distal end to the proximal end, said guide member being configured to act as an exchange guidewire;

(b) means for filtering material from a blood stream, said means being disposed within said lumen of said guide member; and

(c) means for deploying said means for filtering from said lumen of said guide member into the blood stream in the blood vessel and retracting said means for filtering upon completing the procedure.

80. A filter device as recited in claim 79, wherein said means for deploying comprises an actuating assembly.

81. A filter device as recited in claim 80, wherein said actuating assembly comprises an actuating member and an actuating element.

82. A filter device as recited in claim 81, wherein said actuating element is moveable by a human.

83. A filter device as recited in claim 81, wherein said actuating element is coupled to said guide member.

84. A filter device as recited in claim 81, wherein said actuating element comprises an open indicator, a closed indicator, and a retracted indicator.

85. A filter device as recited in claim 79, wherein said means for filtering comprises a filter.

86. A filter device as recited in claim 79, wherein said means for filtering comprises means for opening an end of said means for filtering.

87. A filter device as recited in claim 86, wherein said means for opening comprises a biased member.

88. A filter device comprising:

(a) a guide member comprising a distal end, a proximal end, and a lumen extending from said distal end to said proximal end;

(b) an actuating assembly coupled to said guide member, said actuating assembly comprising:

(i) an actuating member disposed within said lumen of said guide member; and

(ii) an actuating mechanism coupled to said distal end of said guide member and to said actuating member; and

(c) a filter assembly disposed within said lumen and configured to be deployed by said actuating member, said filter assembly comprising:

(i) a filter comprising a proximal end with an opening formed therein; and

(ii) a plurality of struts coupled to said proximal end of said filter and said actuating member, at least one of said plurality of struts being biased to open said opening.

89. The filter device a recited in claim 88, wherein said actuating member is disposed in said lumen of said guide member.

90. The filter device a recited in claim 88, wherein said actuating member is partially disposed in said lumen of said guide member.

91. A filter device as recited in claim 88, wherein said filter assembly comprises means for opening said opening formed in the filter.

92. A filter device as recited in claim 91, wherein said means for opening comprises a biased member.

93. A filter device as recited in claim 92, wherein said biased member is a flexible member.

94. A filter device as recited in claim 92, wherein said biased member is a spring member.

95. A filter device as recited in claim 91, wherein said means for opening comprises said actuating member.

96. A method for operating a vascular filter device during a procedure, comprising:

(a) inserting a filter device into the vasculature of a patient distal of a portion of a blood vessel to be accessed during a procedure, said filter device comprising:

(i) a guide member having a proximal end, a distal end, and a lumen extending from said distal end; and

(ii) a filter disposed within said lumen at said distal end of said guide member;

(b) deploying said filter from within said lumen into the blood stream to capture material that is dislodged during the procedure;

(c) retracting said filter until an open-ended proximal end thereof is positioned in relationship with said guide member to prevent said captured material from escaping from said filter; and

(d) upon positioning a capture catheter to enclose said filter, removing said filter device and said capture catheter from the vasculature of the patient.

97. A method as recited in claim 96, where said filter device comprises means for an actuating member coupled to said guide member.

98. A method as recited in claim 97, further comprising actuating said actuating member to deploy said filter.

99. A method as recited in claim 96, wherein retracting said filter comprises retracting said open-ended proximal end of said filter until said proximal end is in contact with said guide member.

100. A method as recited in claim 96, wherein retracting said filter comprises retracting said open-ended proximal end of said filter into said lumen of said guide member.

101. A method as recited in claim 96, wherein deploying said filter comprises pushing said filter from said lumen.

102. A method as recited in claim 101, further comprising expanding said proximal end of said filter to form said opening.

103. A method as recited in claim 102, wherein expanding said proximal end further comprises automatically expanding said proximal end through rotational motion of an actuating member disposed in said lumen.

104. A method for removing a vascular filter device, comprising:

(a) following deploying a filter of a filter assembly from a guide member by moving an actuating member disposed within a lumen of said guide member in a distal direction, retracting said filter until an opened proximal end of said filter is positioned in relationship with said guide member to prevent the captured material from escaping from said filter; and

(b) upon positioning a capture catheter to enclose said filter, removing said filter device and said capture catheter from the vasculature of the patient.

105. A method as recited in claim 104, wherein retracting said filter comprises moving said actuating member in a proximal direction by moving an actuator element in a proximal direction.

106. A method as recited in claim 105, wherein moving said actuating member further comprises moving said actuator element by-hand to move said actuating member.

107. A restraining mechanism configured to prevent a plurality of struts of a filter device from extending outwardly prior to deploying a filter of the filter device, the restraining mechanism comprising:

(a) a sleeve adapted to be disposed substantially at a distal end of the filter device, said sleeve being adapted to apply a restraining force to the plurality of struts of the filter device to prevent the plurality of struts from extending outwardly; and

(b) at least one actuating member coupled to said sleeve, said at least one actuating member being adapted to release said restraining force of said sleeve and enable the plurality of struts of the filter device to extend outwardly.

108. A restraining mechanism as recited in claim 107, wherein said at least one actuating member is adapted to cause said sleeve to move in a proximal direction upon moving said at least one actuating member in said proximal direction.

109. A restraining mechanism as recited in claim 107, wherein said sleeve is coupled to at least two of said plurality of struts.

110. A restraining mechanism as recited in claim 107, wherein said sleeve comprises at least one preferential separation region.

111. A restraining mechanism as recited in claim 110, wherein said at least one actuating member cooperates with said at least one preferential separation region and is adapted to preferentially separate said sleeve at said at least one preferential separation region.

112. A restraining mechanism configured to prevent a plurality of struts of a filter device from extending outwardly prior to deploying a filter of the filter device, the restraining mechanism comprising:

(a) means for applying a restraining force to the plurality of struts of the filter device to prevent the plurality of struts from extending outwardly, said means for apply the restraining force being coupled to at least one of the plurality of struts; and

(b) at least one actuating member cooperating with said means for applying the restraining force, said at least one actuating member being adapted to release said restraining force of said means for applying said restraining force and enable the plurality of struts of the filter device to extend outwardly to deploy the filter.

113. A restraining mechanism as recited in claim 112, wherein said means for applying the restraining force comprises a sleeve substantially surround the plurality of struts.

114. A restraining mechanism as recited in claim 113, wherein said sleeve is adapted to slide in a proximal direction upon moving said actuating member in the proximal direction.

115. A restraining mechanism as recited in claim 114, wherein said sleeve is a metallic sleeve.

116. A method for releasing a plurality of struts of a filter device during a procedure, comprising:

(a) positioning a filter device in a vasculature of a patient distal of a portion of a blood vessel to be accessed during a procedure, the filter device comprising:

(i) a guide member comprising a distal end;

(ii) a plurality of struts cooperating with said distal end of said guide member;

(iii) a filter coupled to said guide member; and

(iv) a restraining member cooperating with said plurality of struts to prevent said plurality of struts from extending outwardly; and

(b) actuating an actuating member cooperating with said restraining member, wherein actuating said actuating member releases said plurality of struts to deploy said filter.

117. The method as recited in claim 116, wherein actuating said actuating member comprises moving said actuating member in a proximal direction.

118. The method as recited in claim 116, wherein actuating said actuating member further comprises moving said actuating member in a proximal direction to remove said actuating member from cooperating with said restraining member.

119. The method as recited in claim 118, wherein said restraining member further comprises one or more preferential separation regions, wherein said actuating member cooperates with said one or more preferential separation regions to prevent said plurality of struts from extending outwardly.

120. The method as recited in claim 119, wherein moving said actuating member in the proximal direction causes said actuating member to separate said restraining member at said one or more preferential separation regions.